actuator, wherein, for parallel connection, said inner electrodes of identical polarity of said active region are connected to respective outer electrodes, said outer electrodes being disposed on opposite sides of said actuator; electrode-free piezoelectrically inactive regions further comprising a head region and a foot region; and a transitional region having shrinkage and expansion properties lying between the shrinkage and the expansion properties of said active and inactive regions, said transitional regions interposed between said active region and said respective inactive head and foot regions.--

--14. (New) The piezoceramic multilayer actuator of claim 13, wherein in said transitional regions, the electrode-to-electrode spacing between the inner electrodes increases in proximity to said inactive regions.--

--15. (New) The piezoceramic multilayer actuator of claim 14, wherein said increase in spacing of said inner electrodes starts from the spacing of said inner electrodes in said active region and is effected stepwise in a sequence of natural numbers.--

--16. (New) The piezoceramic multilayer actuator of claim 14, wherein said increase in the spacing of said inner electrodes from said transition region through said head region or foot region starts from the spacing of said inner electrodes in said active region and is effected stepwise in a geometric progression.--

--17. (New) The piezoceramic multilayer actuator of claim 14, wherein said increase in the spacing of said inner electrodes in said transitional region through said head region or the foot region starts from the spacing of said inner electrodes in said active region and is effected stepwise according to a logarithmic scale.--

--18. (New) The piezoceramic multilayer actuator of claim 15, wherein the number of steps for increasing the spacing between said electrodes correlates to the

differences between the shrinkage and expansion properties between said active region and at least one of said inactive regions.--

--19. (New) The piezoceramic multilayer actuator of claim 14, wherein the maximum spacing between the last two electrodes in said transitional region is up to 2 mm.--

--20. (New) The piezoceramic multilayer actuator of claim 19, wherein said maximum spacing is 0.1 to 1.0 mm.--

--21. (New) The piezoceramic multilayer actuator of claim 13, wherein said respective transitional regions consist of modified piezoceramic material, the shrinkage and expansion properties of said material lying within the shrinkage and the expansion properties of said active region.--

--22. (New) The piezoceramic multilayer actuator of claim 21, wherein said properties can be influenced by doping said material with impurity atoms of the materials of the inner electrodes.--

--23. (New) The piezoceramic multilayer actuator of claim 22, wherein the sintering properties of the material in the transitional region can be influenced by doping said material with impurity atoms of the materials of the inner electrodes.--

--24. (New) The piezoceramic multilayer actuator of claim 23, wherein said doping exists in a concentration that is produced by natural diffusion in the active region at the boundary between an inner electrode and a ceramic material.--

--25. (New) The piezoceramic multilayer actuator of claim 22, wherein said doping is effected with silver.--